

**Remarks**

The Office Action of May 17, 2006 and the references cited therein have now been carefully studied. Reconsideration and allowance of this application are earnestly solicited.

The present invention is directed to a system and method for providing cathodic protection for non-isolated and electrically grounded, buried or submerged metallic objects or structures. An anti-cross connection device, such as a fuse, circuit breaker or the like, would be included to safeguard the operation of the cathodic protection system.

The Examiner has rejected claims 2-10 and 12 under 35 U.S.C. Sec. 112, 2<sup>nd</sup> paragraph, as being indefinite for failing to point out and distinctly claim the subject matter of the invention. As indicated in this rejection, the Examiner has maintained that claims 2-10 and 12 are vague and indefinite with respect to the word "improved". Additionally, the Examiner has indicated that claim 2 is vague and indefinite for the use of the phrase "for the like". This rejection is respectfully traversed.

Applicant has eliminated the inclusion of the word "improved" in claims 3-10, as well as removing the phrase "for the like" from claim 2. Consequently, reconsideration and allowance and withdrawal of this rejection are respectfully urged.

The Examiner has rejected claims 13-15 under 35 U.S.C. Section 102(b) is being anticipated by the patent to Pultan et al. This rejection is respectfully traversed.

The Pultan et al. reference is directed to a method for cathodic protection to an underground metallic structure utilizing galvanic anodes. A hollow casing having a separate section is placed in a hole. The galvanic anode is also placed in the hollow casing. The excavation and the hollow casing is then filled with a filler material. It is important to note that the hollow casing, including a perforate section, is directly inserted into the

excavation hole. This is in contidistinction with the present invention in which a anode is attached to a container, the container filled with a predetermined amount of backfill material. This predetermined amount of backfill material is precisely sized for the particular anode hole size. Once at the excavation site, the anode is removed from the container and placed in hole, after which the predetermined amount of backfill material contained in the container would be used to precisely fill the hole. It is important to note that the container of the present invention is not placed in the hole. Applicant has canceled claim 13 and has added claim 17 in its place to more particularly recite the teachings of the present invention. As previously noted, the hollow casing of Pulton et al. is directly placed in the excavation site and is not initially provided with a predetermined amount of backfill. Claim 17 specifically recites a method in which a predetermined amount of backfill is initially placed in the container. Additionally, the predetermined amount of backfill would be for a particular anode hole size. Therefore, it is believed that claim 17 and all of the claims dependent therefrom do contain allowable subject matter. Consequently, reconsideration and withdrawal of this rejection are respectfully urged.

The Examiner has rejected claims 1-3 and 9-10 under 35 U.S.C. 102(b) as being anticipated by the patent to Doniguian is respectfully traversed.

The patent to Doniguian describes a "pulsed" cathodic protection system, and in particular a pulsed cathodic protection system that includes multiple outputs synchronized to protect multiple "separate conducting" structures. Additionally, it is noted that the anti-cross connection device for preventing the continuing flow of electrical current when an anode connector is associated with a negative output terminal of a rectifier and the cathode connector is associated with the positive output terminal of the rectifier is not discussed in the Doniguian reference.

The Examiner contends that the trigger and capacitor of the Doniguian reference constitutes an anti-cross connection and is related to the "pulse" feature of the pulse type system, including control internal operating characteristics such as amplitude and frequency described in the Doniguian reference. However, the capacitor merely controls the pulse width of the output pulses in the output direction of the current by preventing current flow of the output direction depending upon the value of the capacitor used. As will be described, the system of the Doniguian patent will continue to function and cause damage in a cross connect condition.

For example, if an operator accidentally switched the output leads of the Doniguian system, the same situation would occur as would happen on any other normal impressed current cathodic protection system. The structure or structures that are supposed to be protected would be oxidized at the anode and the "suitable" anode would be protected. In other words, if the operator inadvertently connects the anode wire to the negative output terminal of the Doniguian unit and the structure wire to the positive outlook terminal of the Doniguian unit, this unit would continue to operate. In the "cross connected" connection, the Doniguian unit would continue to operate normally and, unfortunately, the structure would be oxidized instead of the consumable anode. This would occur since the Doniguian unit only sees the resistance in the external circuit between the piper pipes and the anode and will send pulse current regardless of how the output wires are connected.

Furthermore, it is important to note that the Doniguian patent describes the condition in which the structures to be protected are electrically isolated, or electrically discontinuous from one another. This apparently is a reason that the pulses of the Doniguian unit need to be synchronized because there are two or more separately conducting structures. Claim 1 has been canceled and claim 16 has been added in its place which specifically

indicates that the structure is non-isolated. Although the term "non-isolated" appears in the preamble of claim 16, it is also included in various other portions of this claim. Claim 16 also claims an electrical safety grounding device for electrical safety grounding of the non-isolated structure. It is important to note that when the term "ground" is used in cathodic protection systems it can be confused with the anode bed which is installed in the ground. Therefore, for clarification purposes, the phrase "safety grounding" was included in claim 16.

Finally, applicant respectfully disagrees with the Examiner's statement that " the rectifiers themselves will act as a diode device", as it related to the present invention of an anti-cross connection as the devices mentioned have to do with the internal electronic function of a system rather than the potential for an external cross connection when connecting the system.

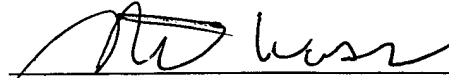
For the reasons enumerated hereinabove, it is believed that new independent claim 16 as well as claims 2, 3 and 9 and 10 are not anticipated by the Doniguian reference. Consequently, reconsideration and withdrawal of this rejection is respectfully urged.

The Examiner has rejected claims 4-8 and 11 under 35 U.S.C. Sec. 103(a) as being unpatentable over Doniguian in combination with the patent to Carpenter and Kosoegawa et al. This rejection is respectfully traversed.

Since it is believed that claim 16, to which the aforementioned claims directly or indirectly depend, contains patentable subject matter, the addition of the Carpenter as well as Kosoegawa references would not change the fact that claim 16, and of the claims depending therefrom contains patentable subject matter. Consequently, reconsideration and withdrawal of this rejection are respectfully urged.

It is believed that the claims now present in this application recite the invention in a patentable manner. Consequently, reconsideration and allowance of this application are earnestly solicited.

Respectfully submitted,

A handwritten signature in dark ink, appearing to read 'M. Wasson', is written over a horizontal line.

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